



Transportation Inspectors

LOGISTICS

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Job Overview

Transportation Inspectors enforce safety rules to protect people and cargo. They inspect equipment, monitor loading procedures, and investigate accidents, complaints, and transportation delays.

Some Inspectors make sure vehicles operate properly and safely. These workers look over vehicles for parts that are broken. They oversee repairs and the replacement of defective parts. They also watch gauges and meters when engines and other equipment are running to monitor systems. Inspectors also study logs to check that scheduled maintenance has been done.

Transportation Inspectors examine a variety of transportation vehicles and are categorized by the following specialties: Aviation Inspectors, Public Transportation Inspectors, Marine Cargo Inspectors, Railroad Inspectors, Motor Vehicle Inspectors, and Freight Inspectors.

Typical Tasks

Aviation Inspectors inspect aircraft, maintenance procedures, air navigational aids, air traffic controls, and communications equipment to ensure conformance with federal safety regulations.

- ➔ Analyze training programs and conduct oral and written examinations to ensure the competency of persons operating, installing, and repairing aircraft equipment.
- ➔ Approve or deny issuance of certificates of airworthiness.
- ➔ Conduct flight test programs to test equipment, instruments, and systems under a variety of conditions, using both manual and automatic controls.
- ➔ Examine landing gear, tires, and exteriors of fuselage, wings, and engines for evidence of damage or corrosion, and to determine whether repairs are needed.
- ➔ Examine maintenance records and flight logs to determine if service and maintenance checks and overhauls were performed at prescribed intervals.
- ➔ Inspect new, repaired, or modified aircraft to identify damage or defects, and to assess airworthiness and conformance to standards, using checklists, hand tools, and test instruments.
- ➔ Inspect work of aircraft mechanics performing maintenance, modification, or repair and overhaul of aircraft and aircraft mechanical systems in order to ensure adherence to standards and procedures.
- ➔ Prepare and maintain detailed repair, inspection, investigation, and certification records and reports.
- ➔ Recommend replacement, repair, or modification of aircraft equipment.
- ➔ Start aircraft, and observe gauges, meters, and other instruments to detect malfunctions.

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Public Transportation Inspectors monitor operation of public transportation systems to ensure good service and compliance with regulations. They investigate accidents, equipment failures, and complaints.

- ➔ Observe employees performing assigned duties to note their deportment, treatment of passengers, and adherence to company regulations and schedules.
- ➔ Observe and record time required to load and unload passengers or freight volume of traffic on vehicle and at stops.
- ➔ Investigate schedule delays, accidents, and complaints.
- ➔ Inspect company vehicles and other property for evidence of abuse, damage, and mechanical malfunction and directs repair.
- ➔ Determine need for changes in service, such as additional vehicles, route changes, and revised schedules to improve service and efficiency.
- ➔ Drive automobile along route to detect conditions hazardous to equipment and passengers and negotiate with local governments to eliminate hazards.
- ➔ Submit written reports to management with recommendations for improving service.
- ➔ Report disruptions to service.
- ➔ Assist in dispatching equipment when necessary.
- ➔ Recommend promotions and disciplinary actions involving transportation personnel.

Marine Cargo Inspectors inspect cargoes of seagoing vessels to certify compliance with health and safety regulations in cargo handling and stowage.

- ➔ Inspect loaded cargo in holds and cargo handling devices to determine compliance with regulations and need for maintenance.
- ➔ Read vessel documents to ascertain cargo capabilities according to design and cargo regulations.
- ➔ Calculate gross and net tonnage, hold capacities, volume of stored fuel and water, cargo weight, and ship stability factors, using mathematical formulas.
- ➔ Determine type of license and safety equipment required, and compute applicable tolls and wharfage fees.
- ➔ Examine blueprints of ship and take physical measurements to determine capacity and depth of vessel in water, using measuring instruments.
- ➔ Write certificates of admeasurement, listing details, such as design, length, depth, and breadth of vessel, and method of propulsion.
- ➔ Issue certificate of compliance when violations are not detected or recommend remedial procedures to correct deficiencies.
- ➔ Time roll of ship, using stopwatch.
- ➔ Analyze data, formulate recommendations, and write reports of findings.
- ➔ Advise crew in techniques of stowing dangerous and heavy cargo, according to knowledge of hazardous cargo.

Railroad Inspectors inspect railroad equipment, roadbed, and track to ensure safe transport of people or cargo.

- ➔ Inspect signals and track wiring to determine continuity of electrical connections.
- ➔ Examine roadbed, switches, fishplates, rails, and ties to detect damage or wear.
- ➔ Examine locomotives and cars to detect damage or structural defects.
- ➔ Inspect and test completed work.

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- Operate switches to determine working conditions.
- Test and synchronize rail-flaw-detection machine, using circuit tester and hand tools, and reload machine with paper and ink.
- Start machine and signal worker to operate rail-detector car.
- Prepare reports on repairs made and equipment, railcars, or roadbed needing repairs.
- Tag rail cars needing immediate repair.
- Fill paint container on rail-detector car used to mark section of defective rail with paint.

Motor Vehicle Inspectors inspect automotive vehicles to ensure compliance with governmental regulations and safety standards.

- Inspect truck accessories, air lines and electric circuits, and report needed repairs.
- Examine vehicles for damage, and drive vehicle to detect malfunctions.
- Test vehicle components for wear, damage, or improper adjustment, using mechanical or electrical devices.
- Apply inspection sticker to vehicles that pass inspection, and rejection sticker to vehicles that fail.
- Prepare report on each vehicle for follow-up action by owner or police.
- Prepare and keep record of vehicles delivered.
- Position trailer and drive car onto truck trailer.
- Notify authorities of owners having illegal equipment installed on vehicle.
- Service vehicles with fuel and water.

Freight Inspectors inspect freight for proper storage according to specifications.

- Inspect shipment to ascertain that freight is securely braced and blocked.
- Observe loading of freight to ensure that crews comply with procedures.
- Monitor temperature and humidity of freight storage area.
- Record freight condition and handling, and notify crews to reload freight or insert additional bracing or packing.
- Measure height and width of loads that will pass over bridges or through tunnels.
- Notify workers of special treatment required for shipments.
- Prepare and submit report after trip.
- Post warning signs on vehicles containing explosives or inflammatory or radioactive materials.

*Detailed descriptions of these occupations may be found in the Occupational Information Network (O*NET) at online.onetcenter.org.*

Important Skills, Knowledge, and Abilities

- Quality Control Analysis — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.
- Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Systems Analysis — Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.

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- Equipment Maintenance — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- Speaking — Talking to others to convey information effectively.
- Repairing — Repairing machines or systems using the needed tools.
- Troubleshooting — Determining causes of operating errors and deciding what to do about it.
- Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
- Public Safety and Security — Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.
- Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- Transportation — Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.
- Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
- Problem Sensitivity — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Written Expression — The ability to communicate information and ideas in writing so others will understand.
- Written Comprehension — The ability to read and understand information and ideas presented in writing.

Work Environment

The job of a Transportation Inspector comes with a great deal of responsibility. Their decisions and actions are important. Negligent work can damage millions of dollars worth of goods and can cost lives. Inspectors are sometimes placed in conflict situations when owners do not agree with their recommendations. All of this can lead to stress.

Transportation Inspectors may work outdoors in all kinds of weather. They may work close to noisy, noxious, and dangerous machinery. To prevent injury, they may have to wear protective or safety clothing, such as heavy work boots, hard hats, and gloves. At times they work in cramped spaces and awkward positions when inspecting vehicles. They may have to enter hot, stuffy cargo holds of ships or ice-cold refrigeration cars.

Transportation Inspectors travel a considerable amount of the time. They may be away from home for several weeks at a time when investigating accidents, consulting, or attending conferences or training. Some work a regular 40-hour week, but the job may involve long and irregular hours, depending on the specialty.

Unionization of this occupation is varied. Those working for railroads may belong to the United Transportation Union. Some may belong to the Teamsters Union. Transportation Inspectors employed by the local, state, or federal government may be members of the Service Employees International Union.

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California's Job Outlook and Wages

The California Outlook and Wage table below represents the occupation across all industries.

Standard Occupational Classification	Estimated Number of Workers 2004	Estimated Number of Workers 2014	Average Annual Openings	2006 Wage Range (per hour)
Transportation Inspectors				
53-6051	2,500	2,800	90	\$20.75 to \$37.75

Wages do not reflect self-employment.

Average annual openings include new jobs plus net replacements.

Source: www.labormarketinfo.edd.ca.gov, Employment Projections by Occupation and OES Employment & Wages by Occupation, Labor Market Information Division, Employment Development Department.

Trends

There are few Transportation Inspectors in California. Over 70 percent of the expected job openings during the 10-year projections period will result from replacing workers who quit, retire, or leave the occupation for other reasons.

Training/Requirements/Apprenticeships

Some employers require work experience in one area of transportation and a bachelor's degree. For example, Inspectors of boats may have an engineering degree and work experience in the U.S. Coast Guard. Aircraft Inspectors often have a degree in aircraft repair and experience as a mechanic. Some Federal Inspector jobs require applicants to pass the Professional and Administrative Career Exam. A bachelor's degree and three years of experience are required to take this exam.

Novice Inspectors work under the guidance of experienced Inspectors. Formal classroom training may be available as well. As Inspectors gain knowledge and experience, they work on more difficult inspections and have greater independence.

Experience as an Inspector in the military, plus the proper educational background, may serve to qualify a job seeker for civilian inspection jobs.

Recommended High School Course Work

Those interested in this occupation should take college preparation courses in high school. This typically includes four years of English, three years of math, three years of social studies, and two years of science. Some colleges also require two years of a second language.

Below is a list of high school courses that are helpful for preparation for this occupation. While not all are necessary, they should be considered. Some of these courses are also available at technical schools.

- ➡ Algebra
- ➡ Blueprint Reading
- ➡ Calculus
- ➡ Computer Technology
- ➡ English and Language Arts
- ➡ Life and Physical Sciences
- ➡ Mathematics
- ➡ Physics

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Where Do I Find the Job?

Most Transportation Inspectors work for the federal, state, or local government. For positions with the federal government, candidates can search for job openings or apply on-line through the U.S. Office of Personnel Management Web site at www.usajobs.opm.gov. To explore job opportunities with the State of California, go to www.spb.ca.gov for information on exams or vacancies. For positions within local government, contact the city or county human resource departments in areas where you are interested.

Use the *Search for Employers by Industry* feature on the *Career Center* page at www.labormarketinfo.edd.ca.gov to locate employers in your area. Search under the following industry names to get a list of private firms and their addresses:

- ➔ Aircraft Engine and Engine Parts
- ➔ Aircraft Manufacturing
- ➔ Freight Transportation Arrangement
- ➔ General Freight Trucking, Local
- ➔ General Freight Trucking, Long-Dist TL
- ➔ Guided Missiles and Space Vehicles
- ➔ Other Aircraft Parts and Equipment
- ➔ Passenger Car Rental
- ➔ Truck, Trailer and RV Rental and Leasing

Search these **yellow page** headings for listings of private firms:

- ➔ Airlines
- ➔ Railroad Companies
- ➔ Ships & Ship Operation
- ➔ Trucking

The above is not a complete list.

Where Can the Job Lead?

Many Transportation Inspectors work for government agencies. Their advancement is often in the form of higher wages as they gain experience. Inspectors who have excellent organizational and people skills may become supervisors. Some Inspectors become consultants.

Related Occupations

Bus Drivers, Transit and Intercity (see *Occupational Guide No. 2*)
Construction and Building Inspectors (see *Construction Careers*)
Immigration and Customs Inspectors
Industrial Safety and Health Engineers
Locomotive Engineers (see *Logistics Profile*)
Marine Engineers
Nuclear Equipment Operation Technicians (see *Occupational Guide No. 379*)
Police Identification and Records Officers
Rail Yard Engineers, Dinkey Operators, and Hostlers (see *Logistics Profile*)
Shipping, Receiving, and Traffic Clerks (see *Logistics Profile*)

Other Sources

International Brotherhood
of Teamsters
www.teamster.org

United Transportation Union
www.utu.org

Service Employees
International Union
www.seiu.org